

This Page Is Inserted by IFW Operations
and is not a part of the Official Record

BEST AVAILABLE IMAGES

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images may include (but are not limited to):

- BLACK BORDERS
- TEXT CUT OFF AT TOP, BOTTOM OR SIDES
- FADED TEXT
- ILLEGIBLE TEXT
- SKEWED/SLANTED IMAGES
- COLORED PHOTOS
- BLACK OR VERY BLACK AND WHITE DARK PHOTOS
- GRAY SCALE DOCUMENTS

IMAGES ARE BEST AVAILABLE COPY.

**As rescanning documents *will not* correct images,
please do not report the images to the
Image Problem Mailbox.**

RECEIVED

NOV 13 2001

TECH CENTER 1600/2900

16C/

OIPE

1635

RAW SEQUENCE LISTING

DATE: 09/14/2001

PATENT APPLICATION: US/09/310,844B

TIME: 11:44:18

Input Set : A:\PTO_VSK.txt

Output Set: N:\CRF3\09142001\I310844B.raw

#20/R.T.

11-15-01

ENTERED RAW SEQ
Listing

p. 5

3 <110> APPLICANT: Ecker, David J.
4 Griffey, Richard
5 Crooke, Stanley T.
6 Sampath, Ranga
7 Swayze, Eric
8 Mohan, Venkatraman
9 Hofstadler, Steven
10 McNeil, John
12 <120> TITLE OF INVENTION: Molecular Interaction Sites Of Interleukin-2 RNA And Methods
Of
13 Modulating The Same
15 <130> FILE REFERENCE: IBIS0171
17 <140> CURRENT APPLICATION NUMBER: 09/310,844B
C--> 18 <141> CURRENT FILING DATE: 2001-08-28
20 <160> NUMBER OF SEQ ID NOS: 416
22 <170> SOFTWARE: PatentIn version 3.1
24 <210> SEQ ID NO: 1
25 <211> LENGTH: 24
26 <212> TYPE: RNA
27 <213> ORGANISM: Artificial Sequence
29 <220> FEATURE:
30 <223> OTHER INFORMATION: Novel Sequence ✓
32 <220> FEATURE:
33 <221> NAME/KEY: misc_feature
34 <222> LOCATION: (1)..(4)
35 <223> OTHER INFORMATION: N is any nucleotide
38 <220> FEATURE:
39 <221> NAME/KEY: misc_feature
40 <222> LOCATION: (6)..(12)
41 <223> OTHER INFORMATION: N is any nucleotide
44 <220> FEATURE:
45 <221> NAME/KEY: misc_feature
46 <222> LOCATION: (14)..(15)
47 <223> OTHER INFORMATION: N is any nucleotide
50 <220> FEATURE:
51 <221> NAME/KEY: misc_feature
52 <222> LOCATION: (17)..(24)
53 <223> OTHER INFORMATION: N is any nucleotide
56 <400> SEQUENCE: 1 ✓
W--> 57 nnnnnnnnnnn nnunnnnnnn nnnn ✓
60 <210> SEQ ID NO: 2
61 <211> LENGTH: 31
62 <212> TYPE: RNA
63 <213> ORGANISM: Artificial Sequence
65 <220> FEATURE:
66 <223> OTHER INFORMATION: Novel Sequence ✓
68 <400> SEQUENCE: 2
69 uuuacaacau aaucuaguuu acagaaaaau c

24

31

RAW SEQUENCE LISTING
 PATENT APPLICATION: US/09/310,844B

DATE: 09/14/2001
 TIME: 11:44:18

Input Set : A:\PTO_VSK.txt
 Output Set: N:\CRF3\09142001\I310844B.raw

RECEIVED

NOV 13 2001

TECH CENTER 1600/2900

72 <210> SEQ ID NO: 3
 73 <211> LENGTH: 48
 74 <212> TYPE: RNA
 75 <213> ORGANISM: Artificial Sequence
 77 <220> FEATURE:
 78 <223> OTHER INFORMATION: Novel Sequence ✓
 80 <220> FEATURE:
 81 <221> NAME/KEY: misc_feature
 82 <222> LOCATION: (1)..(4)
 83 <223> OTHER INFORMATION: N is any nucleotide
 86 <220> FEATURE:
 87 <221> NAME/KEY: misc_feature
 88 <222> LOCATION: (6)..(6)
 89 <223> OTHER INFORMATION: N is any nucleotide
 92 <220> FEATURE:
 93 <221> NAME/KEY: misc_feature
 94 <222> LOCATION: (12)..(14)
 95 <223> OTHER INFORMATION: N is any nucleotide
 98 <220> FEATURE:
 99 <221> NAME/KEY: misc_feature
 100 <222> LOCATION: (20)..(21)
 101 <223> OTHER INFORMATION: N is any nucleotide
 104 <220> FEATURE:
 105 <221> NAME/KEY: misc_feature
 106 <222> LOCATION: (24)..(24)
 107 <223> OTHER INFORMATION: N is any nucleotide
 110 <220> FEATURE:
 111 <221> NAME/KEY: misc_feature
 112 <222> LOCATION: (44)..(45)
 113 <223> OTHER INFORMATION: N is any nucleotide
 116 <220> FEATURE:
 117 <221> NAME/KEY: misc_feature
 118 <222> LOCATION: (48)..(48)
 119 <223> OTHER INFORMATION: N is any nucleotide
 122 <400> SEQUENCE: 3 ✓✓✓

W--> 123 nnnnanaugg gnnnucacan nuanucugugu uccuauggaa acunhuun ✓✓✓

48

126 <210> SEQ ID NO: 4
 127 <211> LENGTH: 45
 128 <212> TYPE: RNA
 129 <213> ORGANISM: Artificial Sequence
 131 <220> FEATURE:
 132 <223> OTHER INFORMATION: Novel Sequence ✓
 134 <400> SEQUENCE: 4
 135 uaggauaugg gucacacuua ucuguguucc uauggaaacu auuug
 138 <210> SEQ ID NO: 5
 139 <211> LENGTH: 44
 140 <212> TYPE: RNA
 141 <213> ORGANISM: Artificial Sequence
 143 <220> FEATURE:

45

RAW SEQUENCE LISTING

DATE: 09/14/2001

PATENT APPLICATION: US/09/310,844B

TIME: 11:44:18

Input Set : A:\PTO_VSK.txt

Output Set: N:\CRF3\09142001\I310844B.raw

144 <223> OTHER INFORMATION: Novel Sequence
 146 <400> SEQUENCE: 5
 147 uaggagaugg gggucacacu uacuguguuc cuauggaaac uuug 44
 150 <210> SEQ ID NO: 6
 151 <211> LENGTH: 45
 152 <212> TYPE: RNA
 153 <213> ORGANISM: Artificial Sequence
 155 <220> FEATURE:
 156 <223> OTHER INFORMATION: Novel Sequence ✓
 158 <400> SEQUENCE: 6
 159 uaggagaugg ggggucacac uuacuguguu ccuaugaaac uuug 45
 162 <210> SEQ ID NO: 7
 163 <211> LENGTH: 30
 164 <212> TYPE: RNA
 165 <213> ORGANISM: Artificial Sequence
 167 <220> FEATURE:
 168 <223> OTHER INFORMATION: Novel Sequence ✓
 170 <220> FEATURE:
 171 <221> NAME/KEY: misc_feature
 172 <222> LOCATION: (6)..(8)
 173 <223> OTHER INFORMATION: N is any nucleotide
 176 <220> FEATURE:
 177 <221> NAME/KEY: misc_feature
 178 <222> LOCATION: (14)..(15)
 179 <223> OTHER INFORMATION: N is any nucleotide
 182 <220> FEATURE:
 183 <221> NAME/KEY: misc_feature
 184 <222> LOCATION: (18)..(18)
 185 <223> OTHER INFORMATION: N is any nucleotide
 188 <400> SEQUENCE: ✓
 W--> 189 augggnnnuc acannuancu guguccuau 30
 192 <210> SEQ ID NO: 8
 193 <211> LENGTH: 27
 194 <212> TYPE: RNA
 195 <213> ORGANISM: Artificial Sequence
 197 <220> FEATURE:
 198 <223> OTHER INFORMATION: Novel Sequence ✓
 200 <400> SEQUENCE: 8
 201 augggucaca cuuauugug uuccuau 27
 204 <210> SEQ ID NO: 9
 205 <211> LENGTH: 28
 206 <212> TYPE: RNA
 207 <213> ORGANISM: Artificial Sequence
 209 <220> FEATURE:
 210 <223> OTHER INFORMATION: Novel Sequence ✓
 212 <400> SEQUENCE: 9
 213 auggggguca cacuuacugu guuccuau 28
 216 <210> SEQ ID NO: 10
 217 <211> LENGTH: 29

RAW SEQUENCE LISTING
 PATENT APPLICATION: US/09/310,844B

DATE: 09/14/2001
 TIME: 11:44:18

Input Set : A:\PTO_VSK.txt
 Output Set: N:\CRF3\09142001\I310844B.raw

```

218 <212> TYPE: RNA
219 <213> ORGANISM: Artificial Sequence
221 <220> FEATURE:
222 <223> OTHER INFORMATION: Novel Sequence ✓
224 <400> SEQUENCE: 10
225 auggggggguc acacuuacug uguuccuau 29
228 <210> SEQ ID NO: 11
229 <211> LENGTH: 17
230 <212> TYPE: RNA
231 <213> ORGANISM: Artificial Sequence
233 <220> FEATURE:
234 <223> OTHER INFORMATION: Novel Sequence ✓
236 <220> FEATURE:
237 <221> NAME/KEY: misc_feature
238 <222> LOCATION: (5)..(6)
239 <223> OTHER INFORMATION: N is any nucleotide
242 <220> FEATURE:
243 <221> NAME/KEY: misc_feature
244 <222> LOCATION: (10)..(10)
245 <223> OTHER INFORMATION: N is any nucleotide
248 <400> SEQUENCE: 11
W--> 249 caagnnuuun uagcuug 17
252 <210> SEQ ID NO: 12
253 <211> LENGTH: 18
254 <212> TYPE: RNA
255 <213> ORGANISM: Artificial Sequence
257 <220> FEATURE:
258 <223> OTHER INFORMATION: Novel Sequence
260 <400> SEQUENCE: 12
261 caagcauuug uagcuugu 18
264 <210> SEQ ID NO: 13
265 <211> LENGTH: 18
266 <212> TYPE: RNA
267 <213> ORGANISM: Artificial Sequence
269 <220> FEATURE:
270 <223> OTHER INFORMATION: Novel Sequence
272 <400> SEQUENCE: 13
273 caagcguuug uagcuugu 18
276 <210> SEQ ID NO: 14
277 <211> LENGTH: 18
278 <212> TYPE: RNA
279 <213> ORGANISM: Artificial Sequence ✓
281 <220> FEATURE:
282 <223> OTHER INFORMATION: Novel Sequence ✓
284 <400> SEQUENCE: 14
285 caagcauuua uagcuugu 18
288 <210> SEQ ID NO: 15
289 <211> LENGTH: 18
290 <212> TYPE: RNA

```

RAW SEQUENCE LISTING

DATE: 09/14/2001

PATENT APPLICATION: US/09/310,844B

TIME: 11:44:18

Input Set : A:\PTO_VSK.txt

Output Set: N:\CRF3\09142001\I310844B.raw

```

291 <213> ORGANISM: Artificial Sequence
293 <220> FEATURE:
294 <223> OTHER INFORMATION: Novel Sequence
296 <400> SEQUENCE: 15
297 caagcauuug uagcuugu
300 <210> SEQ ID NO: 16
301 <211> LENGTH: 62
302 <212> TYPE: RNA
303 <213> ORGANISM: Artificial Sequence ✓
305 <220> FEATURE:
306 <223> OTHER INFORMATION: Novel Sequence ✓
308 <220> FEATURE:
309 <221> NAME/KEY: misc_feature
310 <222> LOCATION: (21)..(21)
311 <223> OTHER INFORMATION: N is any nucleotide
314 <220> FEATURE:
315 <221> NAME/KEY: misc_feature
316 <222> LOCATION: (34)..(34)
317 <223> OTHER INFORMATION: N is any nucleotide
320 <220> FEATURE:
321 <221> NAME/KEY: misc_feature
322 <222> LOCATION: (37)..(38)
323 <223> OTHER INFORMATION: N is any nucleotide
326 <220> FEATURE:
327 <221> NAME/KEY: misc_feature
328 <222> LOCATION: (41)..(42)
329 <223> OTHER INFORMATION: N is any nucleotide
332 <220> FEATURE:
333 <221> NAME/KEY: misc_feature
334 <222> LOCATION: (44)..(44)
335 <223> OTHER INFORMATION: N is any nucleotide
338 <220> FEATURE:
339 <221> NAME/KEY: misc_feature
340 <222> LOCATION: (46)..(46)
341 <223> OTHER INFORMATION: N is any nucleotide
344 <220> FEATURE:
345 <221> NAME/KEY: misc_feature
346 <222> LOCATION: (48)..(50)
347 <223> OTHER INFORMATION: N is any nucleotide
350 <220> FEATURE:
351 <221> NAME/KEY: misc_feature
352 <222> LOCATION: (54)..(54)
353 <223> OTHER INFORMATION: N is any nucleotide
356 <220> FEATURE:
357 <221> NAME/KEY: misc_feature
358 <222> LOCATION: (57)..(57)
359 <223> OTHER INFORMATION: N is any nucleotide
362 <220> FEATURE:
363 <221> NAME/KEY: misc_feature

```

18

Use of n and / or Xaa has been detected in the Sequence Listing. Review the Sequence Listing to ensure a corresponding explanation is present in the <220> to <223> fields of each sequence using n or Xaa.

VERIFICATION SUMMARY

DATE: 09/14/2001

PATENT APPLICATION: US/09/310,844B

TIME: 11:44:19

Input Set : A:\PTO_VSK.txt

Output Set: N:\CRF3\09142001\I310844B.raw

L:18 M:271 C: Current Filing Date differs, Replaced Current Filing Date

L:57 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:1
L:123 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:3
L:189 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:7
L:249 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:11
L:369 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:16
L:439 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:18
L:517 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:20
L:595 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:23
L:649 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:26
L:715 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:31
L:1023 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:52
L:1401 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:80
L:1863 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:114
L:2211 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:141
L:2413 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:155
L:2415 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:155
L:2539 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:162
L:2541 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:162
L:2643 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:169
L:2757 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:176
L:2883 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:183
L:3129 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:199
L:3195 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:200
L:3435 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:219
L:3731 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:236
L:3733 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:236
L:3891 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:247
L:3921 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:249
L:3987 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:254
L:4077 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:261
L:4161 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:264
L:4179 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:265
L:4329 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:277
L:4503 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:287
L:4605 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:295
L:4623 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:296
L:4641 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:297
L:4659 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:298
L:4677 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:299
L:4707 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:301
L:4725 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:302
L:4779 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:306
L:4809 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:308
L:4839 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:309
L:4857 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:310
L:4875 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:311
L:4893 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:312

VERIFICATION SUMMARY

DATE: 09/14/2001

PATENT APPLICATION: US/09/310,844B

TIME: 11:44:19

Input Set : A:\PTO_VSK.txt

Output Set: N:\CRF3\09142001\I310844B.raw

L:4911 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:313

L:4929 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:314

L:4959 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:316